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Quality Assurance Program

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1. Introduction. This supplement establishes Western Region (WR) procedures for managing the Quality Assurance (QA) of a Weather Forecast Office's (WFO) electronic maintenance program: quantifying a WFO's electronics maintenance program; and describing procedures for planning and conducting program reviews.

2. Quantifying a WFO's Electronics Maintenance Program. The goal of the WR's maintenance program is to meet or exceed established system availability performance measures. All planned maintenance actions shall be loaded on the EMRS maintenance calendar. The Availability statistics for all NWS data acquisition equipment available from the Engineering Maintenance Report System (EMRS) web page is based on all corrective actions with the Preventative/Routine Maintenance (PM) and Modification (MOD) hours factored out. Annual statistics will be based on a prior 12 month period updated monthly.

2.1 WSR-88D. The EMRS group in National Weather Service Headquarters (WSH)

monitors and reports on the availability of the nation's WSR-88D radars. They compile monthly reports based on EMRS entries by local WFO electronics staff. This information will be the basis of the availability used for the WR data. WR will use the nationally established 96% Availability baseline to gage the individual annual WFO 88D system availability.

2.2 ASOS. In addition to the national statistics available through EMRS, data used to determine the Availability of WR's 180 plus Automated Surface Observing Systems (ASOS) will be derived from the non-routine maintenance hours entered in EMRS per site outage. WR will use the regionally established 97% routine to non-routine hours as the baseline to gage the annual availability of individual ASOS systems.

2.3 Upper Air. Data used to determine the availability of WR's Upper Air sites will be based on the average of missed Upper Air flights in the national upper air program. WR will use the nationally established 10 missed flights as a baseline to measure the annual Upper Air availability. If NCEP denies a second release the office will not be charged a failure.

3. Data Quality. Data Quality is critical. Our data systems must be periodically calibrated per established standards, procedures, and schedules to ensure accurate data. Maintenance programs must meet or exceed data quality performance targets to be considered satisfactory.

4. Preventative Maintenance. (PM) Timely performance and reporting of preventative maintenance activities on all equipment is essential to our mission. PMs will be performed in accordance with all rules and instructions germane to the equipment – ASOS Site Technical Manual S100 for ASOS, PMI Work Cards for WSR88D etc. Optimally, PMs will be performed within the following time frames:

PM INCREMENT	Earliest date to begin:	Latest date to complete:
Weekly	3 days prior to due date	3 days after due date
Semi-Monthly	5 days	5 days
Monthly	7 days	7 days
60 day	10 days	10 days
Quarterly	10 days	14 days
Semi-Annual	10 days	21 days
Annual	10 days	28 days

5. Cost minimization. While system availability and data quality are the primary objectives of our operations and maintenance programs, we must strive to minimize costs for required labor and supplies. Our goal is to minimize the costs while we meet or exceed all system availability and data quality requirements. As such, cost targets will not be established for evaluating the "quality" of the maintenance program. Instead, field and regional offices will collaborate to analyze information for identification of best practices, optimum local maintenance program procedures, facility and infrastructure needs, training, and other factors in order to achieve minimal costs.

6. Planning and Conducting Program Reviews. Quality Assurance of the Regional Maintenance Program is of paramount importance to the Regional Headquarters and also the WFO Station Managers. Program reviews will be the mechanism used to monitor Quality Assurance.

6.1 Regional Headquarters. The Chief of the Systems Operations Division (SOD) has delegated the QA program responsibility to the Electronics Program Manager. Periodic reviews are conducted throughout the year by SOD personnel to ensure WFOs are complying with various WSH directives (timely Lowest Replaceable Unit (LRU) return, timely MOD completion, timely PM completion, etc.). Audits are performed prior to annual station visits and/or WFO self evaluations. These audits give an indication of the overall health of a WFO's electronics program. WFOs will be visited once every 2 years by SOD personnel.

6.2 Station Managers. Station managers (MIC, HIC, ESA) must encourage the electronics staff to take timely maintenance actions and efficiently perform all maintenance activities, including timely reporting of all maintenance hours and actions in EMRS. Average A-26 turnaround time will be used to monitor the timeliness of A-26 entries. With few exceptions, office's A-26 turn around time average shall be kept at or under the National Average.

6.3 Station Electronic Technicians. Station Electronics Technicians are responsible for performing quality work and reporting electronics maintenance activities in EMRS in a timely manner. Optimally all EMRS entries should be committed within 5 calendar days of the completion of the job. ETs should also keep the ESA apprised of any QA discrepancies in the work place.